
BULLETIN

of the

Chicago Herpetological Society



Volume 51, Number 10
October 2016



BULLETIN OF THE CHICAGO HERPETOLOGICAL SOCIETY

Volume 51, Number 10

October 2016

Notes on Reproduction of Northern Scarlet Snakes, <i>Cemophora coccinea copei</i> (Serpentes: Colubridae), from North Carolina	Stephen R. Goldberg	165
All Right up Our Alley	Roger A. Repp	167
Minutes of the CHS Board Meeting, September 16, 2016		171
What You Missed at the September Meeting	John Archer	172
Herpetology 2016		174
Advertisements		175
News and Announcements: 2017 CHS Herpetological Grants Program		176

Cover: Eastern hog-nosed snake, *Heterodon platirhinos*. Drawing (as *H. platyrhinos*) from *Zoology of New-York or the New-York Fauna* by James E. De Kay, 1842.

STAFF

Editor: Michael A. Dloogatch—madadder0@aol.com

2014 CHS Board of Directors

President: John Bellah
Vice-president: Jessica Wadleigh
Treasurer: Amy Sullivan
Recording Secretary: Teresa Savino
Corresponding Secretary: Amy Bochenko
Publications Secretary: Aaron LaForge
Membership Secretary: Mike Dloogatch
Sergeant-at-arms: Brandon Ottolino
Members-at-large: Rich Lamszus
Colleen Schwarz
Mike Scott
Immediate past President: John Archer

The Chicago Herpetological Society is a nonprofit organization incorporated under the laws of the state of Illinois. Its purposes are education, conservation and the advancement of herpetology. Meetings are announced in this publication, and are normally held at 7:30 P.M., the last Wednesday of each month.

Membership in the CHS includes a subscription to the monthly *Bulletin*. Annual dues are: Individual Membership, \$25.00; Family Membership, \$28.00; Sustaining Membership, \$50.00; Contributing Membership, \$100.00; Institutional Membership, \$38.00. Remittance must be made in U.S. funds. Subscribers outside the U.S. must add \$12.00 for postage. Send membership dues or address changes to: Chicago Herpetological Society, Membership Secretary, 2430 N. Cannon Drive, Chicago, IL 60614.

Manuscripts published in the *Bulletin of the Chicago Herpetological Society* are not peer reviewed. Manuscripts should be submitted, if possible, on IBM PC-compatible or Macintosh format diskettes. Alternatively, manuscripts may be submitted in duplicate, typewritten and double spaced. Manuscripts and letters concerning editorial business should be sent to: Chicago Herpetological Society, Publications Secretary, 2430 N. Cannon Drive, Chicago, IL 60614. **Back issues** are limited but are available from the Publications Secretary for \$2.50 per issue postpaid.

Visit the CHS home page at <<http://www.Chicagoherp.org>>.

The Bulletin of the Chicago Herpetological Society (ISSN 0009-3564) is published monthly by the Chicago Herpetological Society, 2430 N. Cannon Drive, Chicago IL 60614. Periodicals postage paid at Chicago IL. **Postmaster:** Send address changes to: Chicago Herpetological Society, Membership Secretary, 2430 N. Cannon Drive, Chicago IL 60614.

Notes on Reproduction of Northern Scarlet Snakes,
Cemophora coccinea copei (Serpentes: Colubridae), from North Carolina

Stephen R. Goldberg
Biology Department, Whittier College
Whittier, CA 90608
sgoldberg@whittier.edu

Abstract

A histological examination was conducted on gonadal material from 34 northern scarlet snakes, *Cemophora coccinea copei*, from North Carolina. The smallest mature male (sperm in vas deferens) measured 276 mm SVL and was collected in February. Mean clutch size ($n = 3$) was 4.7 ± 1.5 , range = 3–6. The smallest mature female *C. coccinea copei* (yolk deposition in progress) measured 353 mm SVL and was collected in May. Only 4/14 (29%) of females from this period were reproductively active suggesting only part of the female population breeds each year. *Cemophora coccinea copei* exhibits a reproductive strategy which includes spring breeding utilizing stored sperm produced the previous summer–autumn. This pattern is commonly observed in other North American snake species.

Cemophora coccinea (Blumenbach, 1788) ranges from New Jersey (disjunct population) through Florida, west to eastern Oklahoma and south Texas (Powell et al., 2016). The biology of *Cemophora* is summarized in Williams (1985). The northern scarlet snake, *C. coccinea copei*, is the subspecies that occurs throughout the above range except for peninsular Florida and south Texas (Conant and Collins, 1998). There are numerous reports in the literature of a minimum of two eggs per clutch for *C. coccinea copei* females (Jensen et al., 2008; Beane et al., 2010; Niemiller et al., 2013; Gibbons and Dorcas, 2015). The maximum clutch size of 13 for *C. coccinea copei* was reported by Gibbons and Dorcas (2015) (no specific locality). In a study of *C. coccinea copei* females, all from North Carolina, Palmer and Braswell (1995) reported a mean of 3.58, range of 2–6 eggs for 12 clutches. In this paper I add information on the reproductive biology of *C. coccinea copei* from a histological examination of gonadal material from museum specimens. Utilization of museum specimens for obtaining reproductive data avoids removing additional animals from the wild.

I examined a sample of 34 *C. coccinea copei* consisting of 16 adult males (mean snout–vent length, SVL = $343.5 \text{ mm} \pm 41.9$ SD, range = 275–404 mm), 17 adult females (mean SVL = $363.3 \text{ mm} \pm 38.6$ SD, range = 313–472 mm), 1 subadult female, (SVL = 288 mm) collected from 1947 to 2004 in North Carolina and deposited in the herpetology collection of the North Carolina State Museum of Natural Sciences (NCSM), Raleigh, North Carolina.

The left ovary was removed from females and the left testis and vas deferens were removed from males for histological examination. Tissues were embedded in paraffin, cut into $5 \mu\text{m}$ sections, mounted on glass slides, and stained with Harris hematoxylin followed by eosin counterstain (Presnell and Schreiber, 1997). Slides were examined to ascertain the stage of the testicular cycle or the presence of yolk deposition or corpora lutea. Oviductal eggs or enlarged ovarian follicles $> 8 \text{ mm}$ were counted but were not histologically examined. Not all tissues were available for examination due to prior damages to the snakes. An unpaired *t*-test was used to test for differences between male and female SVLs (Instat, vers. 3.0b, Graphpad Software, San Diego, CA). Histology slides were deposited in NCSM.

There was no significant difference in values of the mean SVL for males versus females (unpaired *t*-test). Testicular histol-

ogy was similar to that reported by Goldberg and Parker (1975) for the colubrid snakes *Coluber taeniatus* and *Pituophis catenifer* (as *Masticophis taeniatus* and *P. melanoleucus*). Monthly stages in the testicular cycle are in Table 1. Three stages were present: (1) regressed, in which seminiferous tubules contained spermatogonia and Sertoli cells; (2) recrudescence, an increase of spermatogenic cells occurred as evidenced by the appearance of primary spermatocytes. Secondary spermatocytes and spermatids appeared in late recrudescence; (3) spermiogenesis, lumina of the seminiferous tubules were lined by sperm or clusters of metamorphosing spermatids. Five of five (100%) histologically examined vasa deferentia from *C. coccinea copei* males collected in February ($n = 1$), April ($n = 1$), and May ($n = 3$) contained sperm. The period of sperm formation encompassed July into October. This indicates breeding by *C. coccinea copei* can occur in winter–spring utilizing sperm that was produced the previous summer–fall and stored over winter in the vas deferens and coincides with reports of spring mating for *C. coccinea copei* (Jensen et al., 2008; Niemiller et al., 2013; Gibbons and Dorcas, 2015). However, *C. coccinea copei* also has the capacity to breed during summer–fall utilizing newly produced sperm, although this has not been reported. The smallest reproductively active male (regressed testis, sperm in vas deferens) measured 276 mm SVL (NCSM 14765) and was collected in February. Timing of the testicular cycle of *C. coccinea copei* with recrudescence beginning in spring and spermiogenesis occurring into autumn are comparable to events in the aestival spermatogenesis

Table 1. Monthly stages in the testicular cycle of 16 adult *Cemophora coccinea copei* males from North Carolina.

Month	N	Regressed	Recrudescent	Spermiogenesis
February	1	1	0	0
March	1	1	0	0
April	2	2	0	0
May	5	1	4	0
June	1	0	1	0
July	3	0	2	1
August	1	0	0	1
September	1	0	0	1
October	1	0	0	1

Table 2. Monthly stages in the ovarian cycle of 17 adult *Cemophora coccinea copei* females from North Carolina;

Month	N	Quiescent	Early yolk deposition	Enlarged follicles > 8 mm	Oviductal eggs
May	7	5	1	1	0
June	6	5	0	1	0
July	3	2	0	0	1
November	1	1	0	0	0

of Saint Girons (1982). This reproductive strategy which includes spring breeding utilizing stored sperm produced the previous summer–autumn has been shown to occur in other North American species of snakes (Goldberg and Parker, 1975).

Four stages were present in the ovarian cycle of *C. coccinea copei* (Table 2): (1) quiescent, no yolk deposition; (2) early yolk deposition, basophilic yolk granules in the ooplasm; (3) enlarged follicles > 8 mm; (4) oviductal eggs. The period of female reproductive activity encompassed May into July (Table 2). Only 4 of 14 (29%) of females from this period were reproductively active, suggesting not all of the female population breeds each year. I have found only part of the female population to breed each year in other species of North American snakes (see Goldberg, 1997).

No females were available from August so I lack data as to when ovarian activity ceases in *C. coccinea copei* in North Carolina. Mean clutch size (n = 3) was 4.7 ± 1.5 , 3, 5, 6 which is within the range reported by Palmer and Braswell (1995) for *C. coccinea copei* females exclusively from North Carolina. The smallest reproductively active female (yolk deposition in progress) measured 353 mm SVL (NCSM 15941) and was collected in May. I arbitrarily considered *C. coccinea copei* NCSM 15883 (SVL = 313 mm) to be an adult and NCSM 9136 (SVL = 288 mm) to be a subadult. As has been previously reported (Jensen et al., 2008; Niemiller et al., 2013; Gibbons and Dorcas, 2015) and based on data in Tables 1 and 2, *C. coccinea copei* is a spring breeder.

In conclusion, based on reports from the literature of *C. coccinea copei* mating in spring, and my histological analysis, this species mates in spring utilizing stored sperm in the vas deferens produced the previous summer–autumn. This pattern of spring breeding utilizing sperm stored over winter from the previous year is commonly followed by other North American snake species (Goldberg and Parker, 1975). Only a portion of the *C. coccinea copei* female population reproduces in a given year.

Acknowledgments

I thank Bryan L. Stuart (NCSM) for permission to examine *C. coccinea copei* and Jeffrey C. Beane (NCSM) for facilitating the loan.

Literature Cited

Beane, J. C., A. L. Braswell, J. C. Mitchell, W. M. Palmer and J. R. Harrison III. 2010. Amphibians and reptiles of the Carolinas and Virginia. Second edition. Chapel Hill: The University of North Carolina Press.

Conant, R., and J. T. Collins. 1998. A field guide to reptiles and amphibians eastern and central North America. Third edition, expanded. Boston: Houghton Mifflin Company.

Gibbons, W., and M. Dorcas. 2015. Snakes of the Southeast. Revised edition. Athens: The University of Georgia Press.

Goldberg, S. R. 1997. Reproduction in the western shovelnose snake, *Chionactis occipitalis* (Colubridae) from California. Great Basin Naturalist 57(1):85-87.

Goldberg, S. R., and W. S. Parker. 1975. Seasonal testicular histology of the colubrid snakes, *Masticophis taeniatus* and *Pituophis melanoleucus*. Herpetologica 31(3):317-322.

Jensen, J. B., C. D. Camp, W. Gibbons and M. J. Elliott (editors). 2008. Amphibians and reptiles of Georgia. Athens: The University of Georgia Press.

Niemiller, M. L., R. G. Reynolds and B. T. Miller (editors). 2013. The reptiles of Tennessee. Knoxville: The University of Tennessee Press.

Palmer, W. M., and A. L. Braswell. 1995. Reptiles of North Carolina. Chapel Hill: The University of North Carolina Press.

Powell, R., R. C. Conant and J. T. Collins. 2016. Peterson field guide to reptiles and amphibians of eastern and central North America. Boston: Houghton Mifflin Harcourt Publishing Company.

Presnell, J. K., and M. P. Schreibman. 1997. Humason’s Animal Tissue Techniques. 5th edition. Baltimore, Maryland: The Johns Hopkins University Press.

Saint Girons, H. 1982. Reproductive cycles of male snakes and their relationships with climate and female reproductive cycles. Herpetologica 38(1):5-16.

Williams, K. L. 1985. *Cemophora*, *C. coccinea* Cope. Scarlet snake. Catalogue of American Amphibians and Reptiles 374.1-374.4.

Appendix

Cemophora coccinea copei examined by county from the North Carolina State Museum of Natural Sciences (NCSM), Raleigh, North Carolina. **Brunswick** NCSM 10725; **Carteret** NCSM 15883; **Cumberland** NCSM 15941, 12828; **Dare** NCSM 9224; **Dorchester** NCSM 57887; **Duplin** NCSM 11545; **Durham** NCSM 33524; **New Hanover** NCSM 7852, 12706, 13891, 14765; 15510, 64382; **Jasper** NCSM 9335; **Laurens** NCSM 9136; **Marion** NCSM 65873; **Montgomery** NCSM 7661, 65876; **Moore** NCSM 62427, 65004, 65960; **Pender** NCSM 33526; **Richmond** NCSM 65965; **Sampson** NCSM 9309, 10035, 25006; **Scotland** NCSM 39552, 41284, 59646; **Sumter** NCSM 46375; **Wake** NCSM 10922; **Wakulla** NCSM 24058; **Wayne** NCSM 7988.

All Right up Our Alley

Roger A. Repp
National Optical Astronomy Observatory
repp@noao.edu

Back in March of 2001, the good Dr. Gordon Schuett and I began a radio-telemetry study on four species of rattlesnakes and Gila Monsters. The first three Western Diamond-backed Rattlesnakes (*Crotalus atrox*) to have transmitters implanted were all females from the same aggregate overwintering den. Of the three, the second one to enter the study was *Crotalus atrox* #2, or Ca2 for short. Ca2 was the apple of my eye. She was a sweet young thing, and everyone who saw her commented on what a pretty *atrox* she was. She was also the first *atrox* to give us the whole parturition experience. What we learned from her was that the nesting experience is a very subtle process with the species. Finding an *atrox* nest in the wild is not a simple affair. While radio-telemetry eventually led us to over 30 *atrox* nests, I never once actually found one without the aid of our transmitters. Even with the transmitters, and repeated visits to the nest sites, we often saw nothing but a snake enter a refuge fat, and come out skinny—with nary a glimpse of either a neonate or one of their telltale shed skins throughout the whole process. The most common vipers in southern Arizona did not get that way by being obvious with their nesting behaviors.

Through these columns, many times over, this author has proven that he doesn't really have a life. Every spare minute is spent seeking our crawly friends. But what has hopefully been made clear, his errant behavior is not necessarily just about finding herps, but rather, finding herps doing something cool. Finding a nesting rattlesnake in the wild is the ultimate in cool. When we finally pulled the plug on the Suizo Mountain study in January of 2016, I still had not yet found my first wild *atrox* nest on my own. Technology had led me to them all. It was still high on my list to find one in the wild without a signal leading me (literally) by the hand to it.

As both of you who read it won't likely remember, this author ended his previous monthly column by describing the excitement that viewing a female *atrox* at Rattlesnake Alley generated. She was a plump thing, yet somehow dainty, and as pretty as an *atrox* can get. It was late in the evening of 19 August 2016 that Dale DeNardo found her. By that point in the evening, we had found so many *atrox* that I had lost all interest in photographing them. But DeNardo's find brought on a total déjà vu experience that took me back to Ca2. It was an all-out flashback, where I saw *not* DeNardo's snake, but Ca2 coiled in that exact same posture so many years ago. The new *atrox* was the spitting image of Ca2. Needless to say, my camera was out and active with this new doppelganger. It wasn't until I downloaded the images that I recognized that Dale's snake was quite pregnant. This realization, coupled with the fact that we had seen 36 other adult *atrox* and zero neonates that same night, and armed with the foreknowledge that August is *the* month for parturition with the species, was the setup for the next visit. The emails began to fly from my fingertips. With prodigious numbers of *atrox* scattered all over Rattlesnake Alley, the odds of finding a nest were surely much higher there than any other

patch of known ground. The responses that came back indicated that most members of the 19 August party were willing to give it another go. The plan was set, and the plan was on.

Thus it came to pass that the early evening of 26 August found Marty Feldner and me hurtling northward in my pickup. All of the bitching that had transpired on the previous trip about the starting time bore fruit, and an arrival at 2000 was preordained. We arrived just ahead of the incoming Dale DeNardo, Sarah and Craig Hurd-Rindy, and Mike Comroe. A visiting herpetologist from Spain, Agus Comacho, also joined us. The other three members of the 19 August expedition opted out. Hence, they missed out. Life can be harsh for those who have their priorities all messed up. Megan Murphy, John Slone, and Brian Lang have yet to learn the Reppian approach to life. Simply put, herping comes first. Everything else, such as religion, family, country, work, sports, and even sex are but trivialities that interfere with herping. Until the entire population on this planet of ours learns to make herping the top priority in life, there can never be peace on Earth.

While the temptation to mercilessly slander at least two of the three missing slackers, (Mr. Lang is forgiven), ripples up and down every fiber of my being, I will instead focus on the A-team who did get out there and grind with us. We started promptly at 2000 hours. The weather conditions at start were 28°C, 50% clouds, 44% humidity, wind speed dead calm. At 0020 hours, we all returned to our start point. By then, it was 25°C, 0% clouds, 56% humidity and dead calm. At no point in the hike did the biggest wuss of the group, (that would be your author), even work up a sweat. It was a monsoonal evening that can best be described as "Arizona Perfect." And there is no need to do anything else but tell the reader the highlights of the A-team's effort on this night. I'm going to spell out the number for *atrox* first. Just writing "51" ain't saying it right. So we spell it out: Fifty One! Even that ain't sayin' it right! Maybe "sayin' it right" might include my own testimony that nothing in the past 27 years of my life has come even close to this evening. (My personal daily high totals for *atrox* were in the high 30s several times in the years 1998 through 2001, and these were all at overwintering aggregate dens).

But it was much, much more than the *atrox* numbers that rang my personal bell. Eight was another number that fascinated me. Never before in over 4,000 herp trips, 20,000 personal field hours, had I witnessed an eight Long-nosed Snake (*Rhinocheilus lecontei*) night! I have seen four many times, and I'm saying those four may have been alive or dead. When hiking them out, I have never seen more than two in a night—regardless of crew size or caliber of herpers. The A-team got eight! Yehaw! And "eight" is more than my yearly total everywhere else for the last four years! But was it the crew, or Rattlesnake Alley that was the cause of this record-breaking evening? The safe answer would be "both."



Figure 1. (Left) The Saddled Leaf-nosed Snake (*Phyllorhynchus browni*) found in Rattlesnake Alley. (Right) Left side view of the spade-like rostral scale. Note the thickness and durability of the feature, as well as the nostril to the side of it. An up and down motion of the head while digging is likely the way it is utilized. Images by Mike Comroe.

We also scored three Leaf-nosed snakes, one of which was a Saddled Leaf-nosed (*Phyllorhynchus browni*), and two were Spotted Leaf-nosed Snakes (*Phyllorhynchus decurtatus*). The fact that both species (if they truly *are* separate species) were found while hiking was yet another first for me. (This has happened three times under my watch while road cruising). As these cool snakes will be described later in the text, we leave it at that. We also scored a Coachwhip (*Coluber flagellum*) that was sleeping a meter above the ground in an acacia, and five Mojave Rattlesnakes (*Crotalus scutulatus*). All totaled, in 4 hours and 20 minutes, our group of seven people had encountered 68 snakes! (And on the road out, Marty and I nailed nine more—making the total for the night a staggering 77 snakes). Going into a blow-by-blow accounting of an evening where a snake is found every 3.8 minutes would be a daunting task, both for me to write and you to read. We’re going to stick to what this author considers the four coolest observations to come out of this evening with the rest of this article.

The first cool observation was two pregnant female *atrox* coiled less than 5 meters apart. In and of itself, I don’t expect a whole bunch of “golly gees” from the readership with this revelation. (This author has learned long ago not to expect *any* “golly gees” from this taciturn group). But based on what we learned with the Suizo Mountain study, the bonding of females during the active season is something that they only do when they are pregnant. When not pregnant, they tend to avoid each

other. Why these expectant mothers might get together could possibly be explained as some form of mutual maternal curiosity, and the genetics work that the Suizo Mountain project produced also suggests relatedness with these pre-parturition pairings. (Schuett et al., *Rattlesnakes of Arizona Volume 2*, in press).

The second cool event involved the Saddled Leaf-nosed Snake (*Phyllorhynchus browni*) (Jeez! Let’s go with PHBR—these damnable Latin nomenclatures can be longer than the snake itself!) that Sarah found out on the crawl. They are always a good find. I sometimes go years without seeing one, and when I do, it’s usually on a nocturnal road cruise. Sarah’s PHBR was roughly 30 cm (~12 inches) total length, which is the average adult size for the species. The find generated much enthusiasm from all in attendance. Marty and Agus took turns posing it on a flat rock, and we all encircled it shoulder to shoulder, photographing whatever angle presented itself (Figure 1).

The third cool event was witnessed and photographed by Marty. He encountered one of the two Spotted Leaf-nosed Snakes (*Phyllorhynchus decurtatus*) (PHDE) nosing about on open ground. This one was roughly the same average adult size as the PHBR Sarah found. As Marty watched and photographed this snake, it seemed to find what it was seeking, and slipped underground (see Figure 2).

Little is known about the habits of Leaf-nosed Snakes. Cer-



Figure 2. One of the two Saddled Leaf-nosed Snakes (*Phyllorhynchus decurtatus*) found on the evening under discussion. When first discovered by Marty Feldner, this snake was nosing about the area, but soon deftly went underground. Now you see it, now you don’t! Images by Martin J. Feldner.

tainly, as Figure 2 demonstrates, they are adept at burrowing, and the enlarged, platelike rostral scale likely serves to assist their ability to root about in and under the ground. I previously tried keeping one, and had no luck in getting it to eat anything. I tried all manner of local lizards, including Banded Geckos, and small snakes, to no avail. Stebbins also suggests they may relish lizard eggs, which probably is the mainstay of their diet. I have been documenting all snakes encountered since 1989, and have discovered something curious about their activity patterns. First, I have never encountered one by flipping objects, which is normally the best way to find fossorial snakes. Secondly, they have all been nocturnal. Thirdly, under my watch, I have only found them from May through August. Not a one in April, and nary a one in September—which are the best months for most other species of snake in Arizona. While I am dubious about them actually being separate species, I accept the current taxonomy as a form of apathetic surrender. Through the years, I have observed 22 of the spotted morph (PHDE), and 35 of the saddled (PHBR). Of the 57 total of both species found through the years, the month of June has yielded 20—over one-third of them.

The main event of the night, and the *real* subject of this article (which is most definitely *not* Leaf-nosed Snakes), occurred shortly after Sarah found her PHBR. At 2140 hours, I was stumbling along the top of the north embankment of Rattlesnake Alley, and found a Marty Feldner. Finding a Marty Feldner seems to be a common occurrence on my herp trips, and is usually not worth mentioning. But since he was unwittingly about to give me the golden key to the outhouse of herpetology (so to speak), we make an exception. He was at the north end of a massive bosque of palo verde trees, shining his flashlight downslope into the dense thicket. He announced that he was looking at an *atrox*, which he did his best to guide my eyes to. After staring for several minutes at the circular beam of his flashlight, which was focused roughly 30 meters deep in the impenetrable maw of the thicket, I pretended to see it. There was little sense in highlighting the fact that my eyes ain't what they used to be to somebody who is already aware of the fact. Marty then informed me that there was a better view of this *atrox* from the wash itself. He led the charge, hooking east around the thicket, and down the steep embankment. As soon as he plunged into Rattlesnake Alley, he promptly hooked east again to continue his herping. This was opposite the direction that his flashlight beam had been aimed when he tried to show me this invisible *atrox* of his. Instead of following him, I turned right, took three steps, and found his *atrox* coiled about one meter up the embankment. As Marty had suggested, it was a much better view here than trying to see it through that briar patch from above.

As *atrox* go, this one was rather drab in appearance. The word “ugly” comes to mind. My first guess was that it was a male. Since I wasn't sure, I did what I was doing with every *atrox* we found. I began seeking a potential nest hole. Two seconds later, I was hollering “I got some neonates here!” Sure enough, approximately 60 cm below and slightly behind the coiled snake was a soil cavity, roughly 10 cm wide by 10 cm tall. A dense canopy of droopy, overhanging branches from the palo verde that towered above obscured the hole. But it was there, and coiled flush with the south-facing entrance to that

hole was a pile of neonate *atrox*. As soon as I saw them, I whisked the flashlight off them, lest they all dive out of sight before the others got the chance to see them. With our Suizo Mountain nesting experiences, the neonates were notoriously skittish, and one quick look might be all that one could get.

As soon as I announced the presence of the neonates, the night grew thick with the beams of flashlights zeroing in on the spot. The sound of thudding feet and brambles breaking reminded me that total chaos was coming on the hoof. Thankfully, Marty was first to arrive. As he is by far a better and more consistent herptographer than I, he was sent in with his camera to get the money shots. He did not disappoint. Others soon arrived, and they too began firing away. It was to be over 15 minutes before I was able to get my own photos of the event! But the time was used wisely. I popped open my herp journal, and began to document it all. Of course, the place now has GPS coordinates assigned to it, and of course, I'm not going to share those. The time of the discovery was 2145 hours, it was 26.5°C, with 20% clouds overhead, 58% humidity, and with nary a hint of breeze. It was muggy and buggy in Rattlesnake Alley.

By 2200 hours, everybody was ready for their next thrill, and moved on. For the second time in almost exactly one week's time, I pulled myself from the hunt. What goes up Rattlesnake Alley must come back down. Whatever came next could not beat what was right here. Powerful forces tried to break my resolve. Within five minutes of them leaving, they found a Coachwhip sleeping in the branches of an acacia. (Figure 3). DeNardo was loudly exhorting me to come over for a look. My reply thundered back “I ain't leaving!” He took the hint. Rather than risk spooking the snakes by looming large over the nest with my flashlight blazing, I sat in the dark on a comfortable hump on the south berm of Rattlesnake Alley. Every 20 minutes, I wandered over to see and photograph what was developing at the nest site. We will let the photos tell the story (see Figures 4–9). By 2315, Mike Comroe came wandering back. By this point in time, mamma had joined her brood in the nest hole. We both spent the next 15 minutes trying to get good images of this, with but marginal results. The main problem was trying to get everything in focus, while dangling twigs and branches cast unwanted shadows. But still, the photographic effort that the reader sees in this article is better than anything we ever got utilizing radio-telemetry.

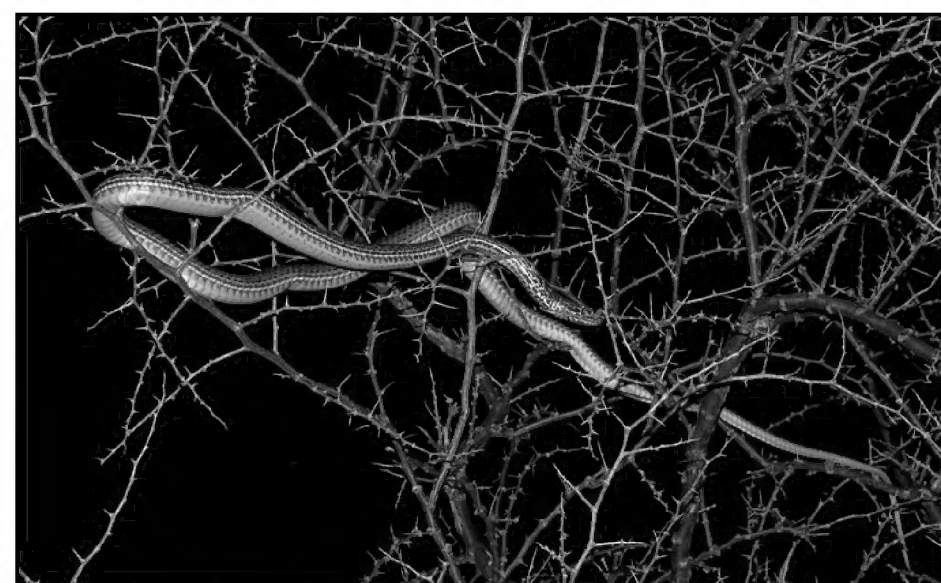


Figure 3. Coachwhip (*Coluber flagellum*) seen roughly one meter off the ground in an acacia. It was assumed that the snake was sleeping when first encountered.



Figure 4. 2147 hours: “I got some neonates here!” After the author made this exclamation, Mr. Feldner was the first one in with his camera. He did not disappoint us. Studying nesting *Crotalus atrox* has taught us that the mothers have strong protective maternal instincts, often never venturing away from their young until their first shedding episode, usually 7–11 days after birth. Note that mamma is situated just above the nest hole at this point in time. Image by Martin J. Feldner.



Figure 6. 2152 hours: Four in the hole, one out on the prowl. Image by Martin J. Feldner.



Figure 8. 2228 hours: After prowling around the upper nest site, the neonate makes one last visit to the nest hole. She then heads westward, eventually disappearing from sight. It is possible that she has vacated permanently, and is beginning her new life on her own. Note the shed skin of yet another neonate at the entrance. Had we arrived 24 hours later, we would have likely missed the action. Image by author.

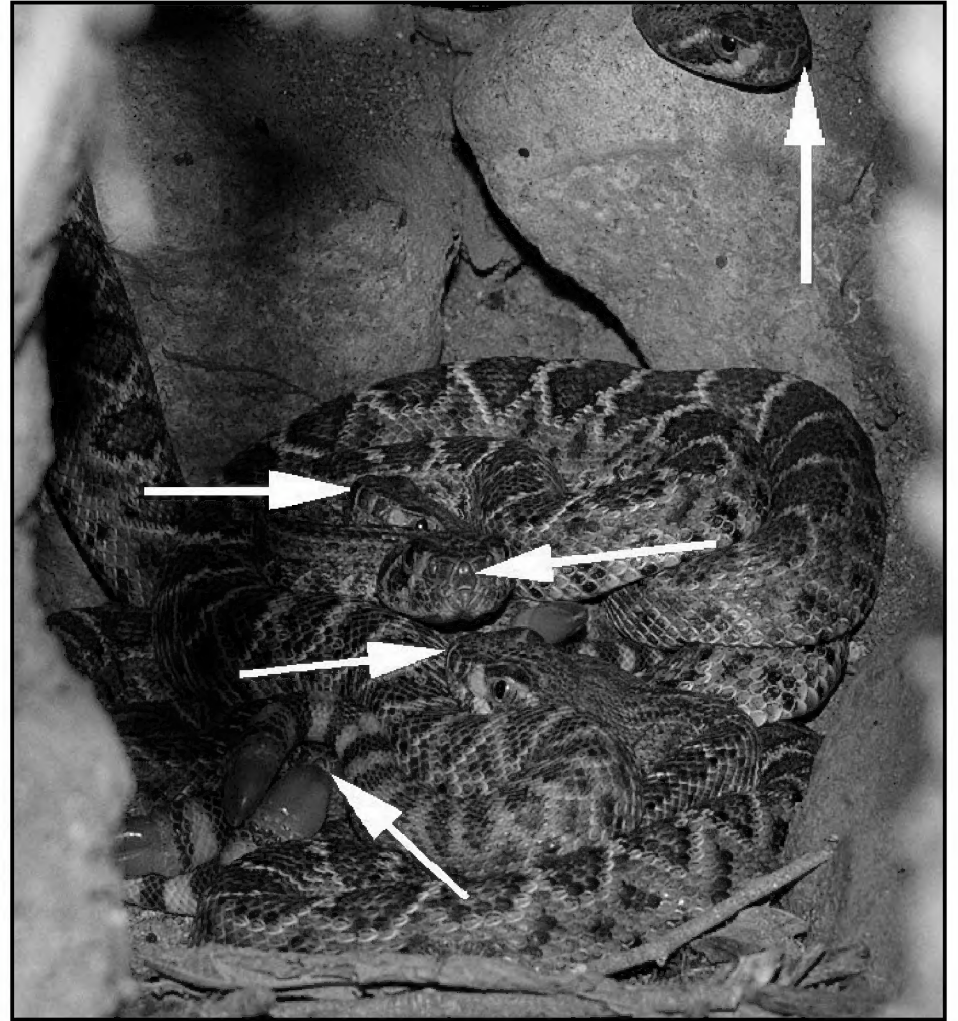


Figure 5. Fire in the hole! This image reveals that there are five neonates in the nest cavity. Just after this image was taken, the neonate in the rear crawled out of the hole. Image and arrows by Martin J. Feldner.



Figure 7. 2201 hours: The neonate that vacated the nest cavity earlier, a female, crawls upslope to join mamma, and sheds her skin (see arrow). This act reveals that the nesting cycle is nearly complete for this particular parturition episode. Image by the author.



Figure 9. 2304 hours: Mamma joins her remaining neonates, and remains there until the end of the observation. Image by the author.

Back in 1988, this author first learned that *atrox* den communally around the Tucson area. He tried to get others to show him some. That never happened, so he did it the best way — the hard way! He found some on his own. By March of 1991, this author was thrilled to find his first aggregate *atrox* overwintering den. Once the secret of finding them was unlocked, he found a bunch more. He learned much from the snakes at these dens. But what he learned was only 25% of the life history of *Crotalus atrox* — and he wanted *more*. He wanted it all! By 1996, the effort to find nesting *atrox* grew intense, and in August of 2001, radio-telemetry took him to his first one. That one was the nest of Ca2.

While witnessing Ca2's nesting experience was cool, it wasn't the same as finding one the honest way. On this evening of 26 August 2016, the culmination of a 20-plus-year dream came about. And it was the ghost of Ca2 that made it happen. The excitement and rapture that this caused within him is impossible to put into words. Perhaps the best part of being a field herpetologist is that every once in a great while, even a grumpy old man can become an enthusiastic kid again.

This here is Roger Repp, signing off from Southern Arizona, where the snakes are handsome, the turtles are strong, and the lizards are all above average.

Minutes of the CHS Board Meeting, September 16, 2016

President John Bellah called the meeting to order at 7:40 P.M. Board members Aaron LaForge and Amy Sullivan were absent. No minutes were read because a quorum was not present at the August 19 board meeting and no minutes were taken.

Midwest Symposium: Nine speakers are scheduled. There will be a side room for vendors and the auction items. We are still looking for an auctioneer. Two sponsors have been recruited: Ty Park and ZooMed. John Vanek, the speaker for the September CHS general meeting requested to have his symposium fee and gas covered in lieu of covering transportation to the meeting. This was approved.

Social media: Morgan Lantz reported that a MeetUp account for the CHS is up and running. She has posted a few of the upcoming shows. An RSVP is required in order for people to be screened if they want to display animals. She is also to be an administrator for the Twitter account and the Facebook pages.

Officers' Reports

Treasurer: Mike Dloogatch read the financial report. Amy Sullivan continues to manage things remotely.

Membership secretary: Mike Dloogatch read the list of memberships that expired in July.

Sergeant-at-arms: Attendance was 39 at the August general meeting.

Committees

Shows: Dick Buchholz reviewed the list of upcoming shows. He noted that the October Notebaert show will conflict with the symposium.

Jr. Herpers: At the August meeting two teens talked about field herping in western Illinois under the auspices of Fred Janzen's lab at Iowa State University. Possible speaker for October will be Black Magic Reptiles. Liz Chapa will fill in if they can't make it. In November and December the kids will give reports on animals from different countries.

Old Business

Bylaws: John Archer presented a set of proposed changes to the

structure of the CHS board of directors. These involved eliminating the position of corresponding secretary and having the recording secretary take on those duties. He also proposed replacing the position of publications secretary with one to be called media secretary. CHS Facebook and Twitter accounts, the website and any other online media would be the responsibility of this secretary. Printed publications would also fall under this office, although that responsibility could be delegated. After discussion John moved that his proposed changes be accepted. The motion passed unanimously. The full wording of the changes will appear in the September *Bulletin* and will be voted on at the next general meeting.

Adoptions fund: Teresa Savino brought up the adoptions fund which is a restricted fund. There was a discussion of how to manage this fund since it keeps growing and is rarely drawn upon. John Archer moved that we cease adding to any existing restricted funds and drop references to restricted donations in any CHS printed or online matter going forward. The motion passed unanimously.

New Business

John Archer suggested that it would be nice to have a handout with information on upcoming speakers to give out at shows.

The meeting adjourned at 9:00 P.M.

Respectfully submitted by recording secretary Teresa Savino

What You Missed at the September Meeting

John Archer
j-archer@sbcglobal.net

One of the facts I like about your society is the thousands of dollars we award each year for herpetological research. It's not easy reading through all of the grant applications we receive, but the awards provide real benefits for many of the scientists and even lay persons that are trying to expand our knowledge of these vastly understudied animals. As a CHS member you're contributing to studies through out the world. Of course, we get more than just the pride of giving. We get speakers. We request that grant recipients inform us of the results of their research either by written or spoken words. Our September speaker was a CHS grant recipient and we got plenty for our investment, not only in interesting and important results but also a really good presentation.



John Vanek. Photograph by Dick Buchholz.

John Vanek's opening slide was an exceptional photo of an eastern hognose (*Heterodon platirhinos*) spotlighted by the sun while crawling over sand turned blue by shadows. The hognose was tan with darker brown spots and its tongue was extended. A moment that great timing and a little luck probably brought to the screen, but definitely a photo that should make John proud of his photography. He gave us an introduction to his talk and himself. His talk would cover some basic biology of the snakes, some of John's techniques in his research, and a little of the ecology of the animals.

John Vanek has a BS in wildlife science from State University of New York College of Environmental Science and Forestry, which he claimed has "the longest name of any university in the United States." He received his Masters from Hofstra University on Long Island where he conducted the studies on hognose and is currently working on his PhD in ecology and conservation from Northern Illinois University while he's employed by the Lake County Forest Preserves. A man of many talents, he's worked with skunks and turtles, bears and rattlers, but he talked to us about hognose snakes.

The genus name *Heterodon* refers to the snakes' rear fangs and the species nominative *platirhinos* recalls the unique nose of the animals. The eastern hognose is polymorphic and John showed us photos of the snakes ranging from the red phase to all black. All of his study snakes were the same light tan with darker brown spots. Such uniformity in color is unusual in hognose populations. John deflated (heh) the widely held belief that the rear fangs of the snake serve to pop puffed-up toads. He showed us a study from the '60s that demonstrated hognose fangs are not even close to the length required to puncture toads, so the current thinking is the rear fangs simply help to better grip toads. In another early study the eastern hognose venom was injected into mice and killed none, but 87% of injected anurans died. John said that these results might not hold for the

western hognose (*Heterodon nasicus*), a very different animal.

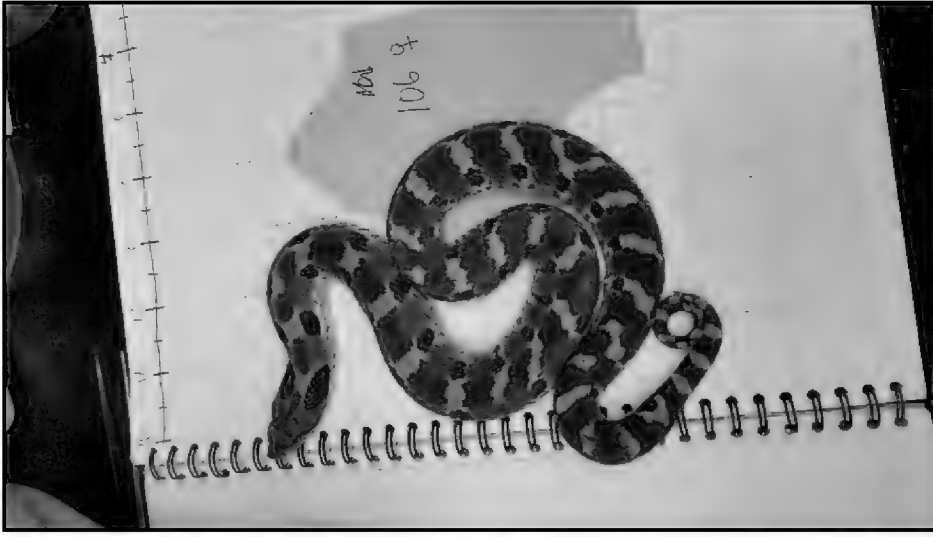
Next we saw maps. Maps of the North American range of the snakes. Maps of New York State and the former range of the hognose there. Close-ups of Long Island showing development and why hognoses are no longer found throughout the island. Mainland New York has 17 species of snakes. Long Island has 11, but its barrier islands have only two to four species. Besides hognoses the islands might have garter snakes (*Thamnophis sirtalis*), black racers (*Coluber constrictor*), or brown snakes (*Storeria dekayi*). We saw photos of the barrier island where John worked, showing a sweeping vista of sandy terrain dominated by invasive *Phragmites*, with patches of bay-

berry, introduced roses, little bluestem, other grasses, and in the background, the sea. It looked like an appealing study site.

John then explained the techniques he used to find and trap snakes, process the animals, and fit them for tracking. He showed us the results of VES (visual encounter survey) versus trapping, with the VES much less successful than the traps, as one would expect when wading through nine-foot-tall *Phragmites* after an 18-inch well-camouflaged snake. He showed us slides of processing his finds with scale clips and length mea-



Beautiful snake in beautiful surroundings.
Photograph by John Vanek.



After they are located and captured, the snakes must be processed.
Photograph by John Vanek.

surements, admitting that the habit of playing dead made it easier to handle hognoses over other snakes. We saw some of his catalog of captures using photos of the unique markings on the snakes' heads. Throughout the presentation he inserted some of his results and conclusions. VES found the most snakes in spring and fall, so John suggested that would be a good time to be looking for the animals, but trapping caught many animals in the summer, which suggests that the animals are active through the summer but are simply moving in places where they are harder to detect. John had pictures of the surgery implanting the radio trackers and pictures of using an antenna to locate the implanted snakes.

He gave us insight into the human land use on the island and descriptions of the methods for determining home ranges and habitat use of the snakes. I really liked the way he walked us through the processes involved in coming to his conclusions and giving us a glimpse into the methods that field researchers often use. Interesting to see how the accepted or expected is often not what the data reveal. He summarized his findings and implications nicely. A previously unstudied and largely unknown population of eastern hognose snakes on a well used by humans barrier island with large and dense numbers of animals having little morphological variation and unusually small size, differing home ranges between the sexes, and a unique habitat use. In questions after the talk and in the discussions over dinner we had more interesting tidbits from John, but it seems he has a chance to publish many papers from this study and we can't put those conclusions in print. Which is another reason you should attend the meetings in person and not rely on my meager accounts.



Preparation for inserting a radio transmitter cannot be fun for the subject.
Photograph by John Vanek.



The barrier island had an unusually high concentration of eastern hognosed snakes. Photograph by John Vanek.

John Vanek gave one of my favorite types of talk. He combined the natural history and biology of the animal with his techniques and data. He took us through the thinking that led to his conclusions. He brought up the unanswered questions that should require further research. He showed us pictures that captured the animals, the environment, and the research, including videos. He was asked good questions and gave good answers and throughout my time with him it was obvious that John enjoyed what he was doing. He provided us with his email at the very beginning and encouraged us to contact him if we had questions (john.p.vanek@gmail.com). He has a YouTube channel which you can find by searching for "John Vanek hognose" which has some neat videos of hognose doing hognose things. John's presentation embodied the reason I go to meetings. The engagement that happens face-to-face cannot be replaced with this article or even a remote viewing (we're working on that.) It's why I attended the Midwest Herpetological Symposium at the beginning of this month. We had a great time mixing with members of the other Midwest herp societies, eating great food, enjoying a fun auction, and experiencing nearly a dozen really outstanding speakers. Much as with John Vanek's talk, we were entertained and informed throughout the weekend.

Or we could have stayed home.

Herpetology 2016

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

MEASURING SNAKES

D. Cundall et al. [2016, *Herpetologica* 72(3):227-234] tested the precision and accuracy of common measurements of snakes by repeated measurement of the heads and trunks of 10 preserved snakes and 10 live snakes by two groups of five people over 10-wk periods. The measurements produced values with variances and ranges related to the nature of the variable, the measurer, and the snake, but accuracy could not be determined. Reporting sizes of snakes to high levels of accuracy is therefore unwarranted. Measurements of head variables on preserved and anesthetized live snakes had similar levels of variance that approximate half the variance of the same measures on live, unanesthetized snakes. Conversely, measurements of snout-vent length (SVL) on both preserved and unanesthetized live snakes had about twice the variance of the same measures made on anesthetized snakes. Measurers differed for all measurements of preserved snakes and for all head measurements of live, unanesthetized snakes, more experienced measurers generally yielding higher precision. Conversely, measurers did not differ for most measures of anesthetized snakes. These data support suggestions that the most repeatable measures of SVL are made on anesthetized snakes. Lengths of the head and lower jaw can be measured with relative precision on a snake in any condition. Head width and supralabial length have both inter- and intrameasurer variances high enough to make them unreliable measures of head size. The authors conclude that features of live snakes most commonly measured vary because they have no exact size. They therefore suggest a new convention for reporting sizes of snakes.

NATURAL HISTORY OF NEONATAL ANACONDAS

J. A. Rivas et al. [2016, *Copeia* 104(2):402-410] note that knowledge of the biology of neonatal snakes has lagged behind that of adult animals, mostly due to the difficulty of finding and studying neonatal snakes in the wild. Traditional approaches view neonatal reptiles as miniature replicates of their adult counterparts. This paper presents data on the natural history of neonatal green anacondas (*Eunectes murinus*) from opportunistic captures in the wild over a 17-year period, as well as from a brief study on captive-born radio-tagged individuals. Both approaches converge in presenting a picture of the ecology of neonatal anacondas showing many similarities between their natural history and that of adult anacondas in spite of the great size difference. The neonates' biology resembles that of adults, especially males, in their preference for birds in their diet, the relative prey size they choose, slow growth rates they experience, low feeding frequency, little mobility, and preference for similar habitats of stagnant, shallow water covered by aquatic vegetation. The conventional wisdom that neonatal reptiles are replicates of their adult counterparts seems to be largely on target in green anacondas.

EMERGENCE OF OVERWINTERING TOADS

T. Green et al. [2016, *Copeia* 104(2):393-401] note that although the timing of amphibians' spring emergence following winter dormancy may vary under the influence of climate change, the behavior of the animals should be more directly a response to the weather and/or other immediate stimuli and may be expected to show some population-level consistencies independent of timing. As such, there should be particular conditions of temperature, precipitation, wind, and/or phase of the lunar cycle at the onset of surface activity in a terrestrially hibernating anuran that may quantitatively differ from prior environmental conditions. Based on 24 years of data from a northern population of Fowler's toads (*Anaxyrus fowleri*), the authors found that the springtime emergence of the toads is associated with increased temperature, relatively little rainfall or wind, and a gibbous moon. This remains true whether the toads emerge relatively early or late in spring. However, the toads' need for warmer temperatures to emerge for the first time in the year appears to significantly decrease the longer they have to wait. After emergence, though, the toads' activity during spring is positively associated with air temperature and negatively associated with wind speed, whereas rainfall and the illumination of the moon are not factors. Thus the environmental conditions necessary to evoke springtime emergence may not necessarily be the same as those that enable the animals' subsequent activity.

COURTSHIP IN THE BIG-HEADED TURTLE

Y.-F. Wei et al. [2016, *The Herpetological Journal* 26(2):85-91] note that turtles are an excellent group for understanding the theory of sexual selection, sexual dimorphism and the evolution of courtship behavior. Asia has a rich diversity of turtle species, but quantitative analysis of courtship behavior has only been conducted on a single species. This study quantitatively analyzed courtship and mating behaviors of captive *Platysternon megacephalum* to serve as a basis for future comparisons with other freshwater turtles. A total of 259 courtship behavior sequences stemming from 66 pairings between 12 males and 24 females were analyzed. Seven (approaching, sniffing, chasing, resting, mounting, subduing female, copulating) and three mutually exclusive motor patterns (fleeing, mating resistance, mating acceptance) were performed by males and females, respectively. The temporal sequences of courtship and mating behaviors were analyzed statistically, and a flow diagram was constructed. Male courtship display patterns involved tactile, visual and olfactory cues for conspecific and sexual recognition. In response, females may have emitted olfactory cues regarding their sex and reproductive status. Male *P. megacephalum* exhibited biting, but no head movement or foreclaw display in courtship, which differs from other freshwater turtles. This study provides the first record of male biting during courtship behavior in an Asian turtle species. Recommendations for captive breeding of the endangered species *P. megacephalum* are presented.

Advertisements

For sale: **highest quality frozen rodents.** I have been raising rodents for over 30 years and can supply you with the highest quality mice available in the U.S. These are always exceptionally clean and healthy with no urine odor or mixed in bedding. I feed these to my own reptile collection exclusively and so make sure they are the best available. All rodents are produced from my personal breeding colony and are fed exceptional high protein, low fat rodent diets; no dog food is ever used. Additionally, all mice are flash frozen and are separate in the bag, not frozen together. I also have ultra low shipping prices to most areas of the U.S. and can beat others shipping prices considerably. I specialize in the smaller mice sizes and currently have the following four sizes available: Small pink mice (1 day old—1 gm) , \$25 /100; Large pink mice (4 to 5 days old—2 to 3 gm), \$27.50 /100; Small fuzzy mice (7 to 8 days old—5 to 6 gm) , \$30/100; Large fuzzy mice / hoppers (10 to 12 days old—8 to 10 gm), \$35/100 Contact Kelly Haller at 785-234-3358 or by e-mail at kelhal56@hotmail.com

For sale: 25 large, heavy-duty, open-top white plastic tubs, most with installed drains, perfect for aquatic/semi-aquatic turtles, small lizards, etc. Segments of PVC drain pipe fitted to tubs can be included with purchase. Each tub is approximately 36 inches by 66 inches, and approximately 12 inches in depth. All are gently used and in great shape. Asking \$75 each, \$65 each for 2 or more. Pick-up only from Kenosha, Wisconsin, area. Contact Jim or Kirsten at (262) 331-3423.

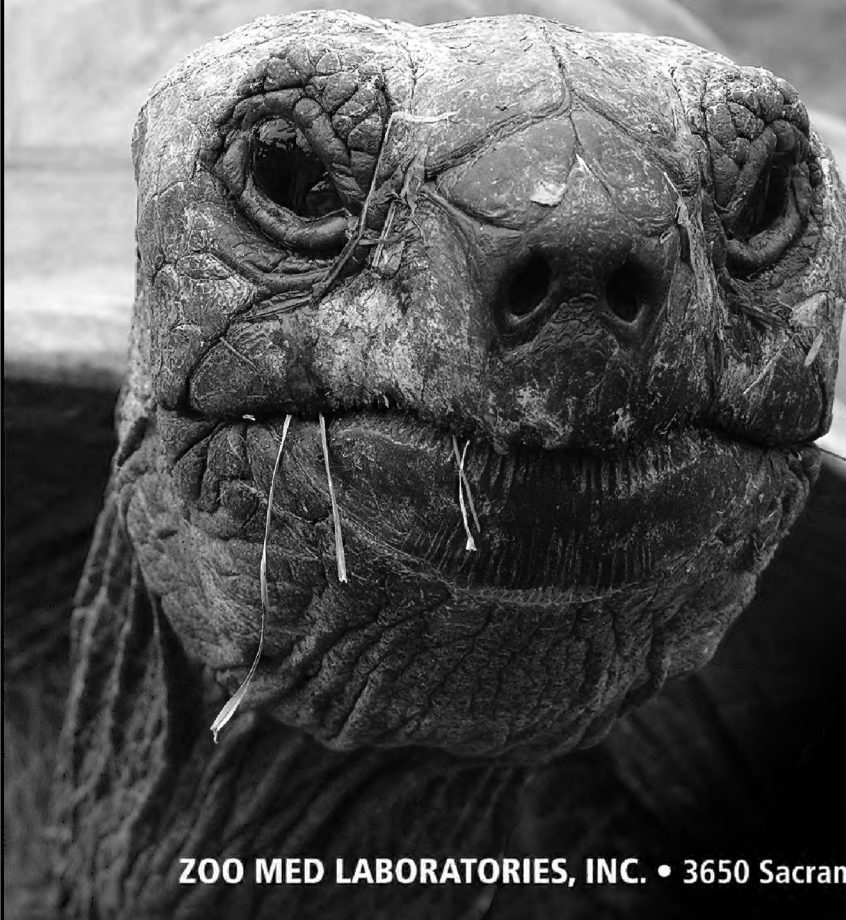
For sale: Standard 24" Neodesha reptile cages, 3 × 6" vent on top, tempered glass front. Like new condition, no burns or stains, original glass. These cages do not have the dam (horizontal molding that crosses the entire front width of the cage, used to hold back bedding material)—easier to clean without the dam. About 20 currently available, \$45 each. Linda Malawy, (630) 717-9955, linda_malawy@hotmail.com.

Herp tours: **Costa Rica herping adventures.** Join a small group of fellow herpers for 7 herp-filled days. We find all types of herps, mammals, birds and insects, but our target is snakes. We average 52 per trip, and this is our 10th year doing it. If you would like to enjoy finding herps in the wild and sleep in a bed at night with air-conditioning, hot water and only unpack your suitcase once, instead of daily, then this is the place to do it. Go to our web-site <http://hiss-n-things.com> and read the highlights of our trips. Read the statistics of each trip and visit the link showing photos of the 40 different species we have found along the way. E-mail at jim.kavney@gmail.com or call Jim Kavney, 305-664-2881.

Line ads in this publication are run free for CHS members — \$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to mdloogatch@chicagoherp.org.

Natural TORTOISE FOODS








NATURAL Grassland Tortoise Food and NATURAL Forest Tortoise Food

- High fiber, low protein diet just like they get in nature.
- See the pieces of grass in each pellet.
- Natural! No artificial colors, flavorings, or preservatives added.
- Colored corn or wheat based foods should not be fed as a regular tortoise diet, as these types of foods could lead to unnatural shell growth and health problems (i.e. pyramiding).



ZOO MED is a proud sponsor of the  www.turtlesurvival.org

Look for these other fine **NATURAL FOODS** from **ZOO MED**:



Aquatic Turtle Hatchling Formula



Aquatic Turtle Growth Formula



Aquatic Turtle Maintenance Formula



Box Turtle Food



Adult Iguana Food



Juvenile Iguana Food



Adult Bearded Dragon Food



Juvenile Bearded Dragon Food

ZOO MED LABORATORIES, INC. • 3650 Sacramento Dr. • San Luis Obispo, CA 93401

www.zoomed.com

News and Announcements

2017 CHS HERPETOLOGICAL GRANTS PROGRAM

The mission of the Chicago Herpetological Society is education, conservation and the advancement of herpetology. To further this mission, the CHS provides grants of up to \$1,000 in the following categories:

1. Illinois Herpetology
2. Graduate Student Research in Herpetology
3. Undergraduate Research in Herpetology
4. Conservation
5. Captive Management, Husbandry and Propagation

The number of grants awarded in each category will depend on the grant applications received; it is possible that not all categories will receive awards and some categories may receive more than one award. The Grants Committee reserves the right to reassign the category under which a given proposal is submitted.

To qualify for a grant, the applicant must be a member of the Chicago Herpetological Society as of December 31, 2016. In accepting a grant, the recipient agrees to acknowledge the Chicago Herpetological Society in any publications or public presentations of research funded by this grant. Further, the recipient agrees to abide by all state and federal laws.

Recipients must submit a short report of their research findings to the CHS within 6 months of their anticipated completion date. The report should be written for a general audience and be suitable for publication in the CHS *Bulletin* or on the CHS webpage. This requirement may be waived if results will be published in a peer-reviewed journal within a year. Recipients may be invited to present a program at a CHS general meeting.

Applications must include the following:

1. Project title
2. Applicant's name, address, phone and email
3. Submission category
4. Introduction—Provide background for the proposed work. Include a clear statement of the objectives of the proposed work.
5. Materials and methods—Describe the study site and the materials and methods (in non-technical terms) that will be used to accomplish the objectives of the proposed research. Attach plans, diagrams and maps as necessary. Indicate whether you have an approved Animal Care (IACUC) protocol covering the proposed methods or whether you will be submitting such a protocol.
6. Applicability and broader implications—How does this work apply to conservation, education and the advancement of herpetology?
7. Budget—Indicate the budget for the entire project and make clear what portion the CHS grant money would fund.
8. Anticipated completion date for the research
9. Applicant curriculum vitae
10. Letters of support—Student applicants must include a letter of support from a faculty advisor. For non-academic individual and institutional applicants, letters of support from collaborating partners or institutions are strongly encouraged. Letter(s) of support may be emailed and should include an address and phone number at which the writer can be contacted. Letter(s) of support may also be sent by postal mail.

Proposals should be submitted as email attachments. Attachments should include the applicant's name in the file name. Proposal text should not exceed five double-spaced pages (excluding literature cited, applicant's CV, and letters of support) and should be typed using a common font (e.g., Arial, Times, Courier) no smaller than 10 pt. Applications must be received by December 31, 2016, and awards will be announced by February 15, 2017.

Proposals or questions should be emailed to grants@chicagoherp.org

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, October 26, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. **Ryan McVeigh**, founder and current president of the Madison Area Herpetological Society, will be our speaker.

Marty Crump, adjunct professor of biology at Utah State and Northern Arizona Universities, will be speaking at the November 30 meeting. Marty's latest book, *Eye of Newt and Toe of Frog, Adder's Fork and Lizard's Leg*, deals with the lore and mythology of amphibians and reptiles, and this will be the topic of her talk.

The regular monthly meetings of the Chicago Herpetological Society take place at Chicago's newest museum—the **Peggy Notebaert Nature Museum**. This beautiful building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the next board meeting, to be held at 7:30 P.M., Friday, November 18, 2016, at the Schaumburg Township District Library, 130 S. Roselle Road, Schaumburg.

The Chicago Turtle Club

The monthly meetings of the Chicago Turtle Club are informal; questions, children and animals are welcome. Meetings normally take place at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Parking is free. For more info visit the group's Facebook page.

ABSENTEE BALLOTS

Election of CHS officers and members-at-large of the board of directors will take place at the November 30 general meeting. A downloadable absentee ballot will be posted at www.chicagoherp.org for use by members who wish to vote but who cannot be present at the meeting. Mailing instructions will appear on the ballot.

THANKS TO ALL WHO HELPED AT THE MIDWEST HERP SYMPOSIUM

The Midwest Herpetological Symposium was a huge success. This would not have been possible without the contributions of a large number of volunteers. Thanks are due to John Archer, Zorina Banas, Norine Barnes, Bob Bavirsha, John Bellah, Karen Bielski, Rich Crowley, Dave Fogel, Kim Klisiak, Nancy Kloskowski, Bob Krause, James Krause, Deb Krohn, Aaron LaForge, Linda Malawy, Andy Malawy, Theresa Moran, Gail Oomens, Zac Oomens, Teresa Savino, Mike Scott, Andy Snider and Don Wheeler.

THE ADVENTURES OF SPOT



Periodicals Postage
Paid at Chicago IL

CHICAGO HERPETOLOGICAL SOCIETY

Affiliated with the Chicago Academy of Sciences

2430 North Cannon Drive • Chicago, Illinois 60614
